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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,928	05/23/2001	Lin Wang	211534	1613
23460	7590	06/16/2004	EXAMINER	
LEYDIG VOIT & MAYER, LTD TWO PRUDENTIAL PLAZA, SUITE 4900 180 NORTH STETSON AVENUE CHICAGO, IL 60601-6780			FONTAINE, MONICA A	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/863,928

Applicant(s)

WANG ET AL.

Examiner

Monica A Fontaine

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 33-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 33-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

This office action is in response to the Amendment filed 24 March 2004.

All previous rejections have been withdrawn, as necessitated by amendment.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Lengerich (U.S. Patent 6,190,591), in view of Rose et al. (U.S. Patent 6,284,359). Regarding Claim 1, van Lengerich shows that it is known to carry out a process for preparing a cold-water soluble extruded starch product that has a solubility greater than 90% in water at 25°C and that is film forming in aqueous solution (Abstract; Column 22, lines 32-33), the process comprising providing a starch, (Column 7, lines 54-65), and extruding said starch in an extruder, said extruder having a barrel, a die, and at least one rotating shaft, said barrel having at least first and second zones, said first zone being upstream from said second zone, the temperature in said first zone being insufficient to gelatinize said starch (Column 22, lines 39-48) and the temperature in said second zone being sufficient to gelatinize said starch, said starch being extruded in the presence of total moisture in said barrel no greater than about 25% by weight of said starch, said process including the step of controlling the rotational speed of said shaft to

impart a specific mechanical energy to said starch sufficient to result in a soluble extruded starch product that is capable of extrusion through said die at said rotational speed (Column 22, lines 49-67). van Lengerich does not explicitly show a hydroxyalkyl starch. Rose et al., hereafter "Rose," show that it is known to carry out a process for making a soluble starch product wherein the starch is a hydroxyalkyl starch being derivatized with a hydroxyalkyl substituent having from 2 to 6 carbon atoms (Column 4, lines 6-14). Rose and van Lengerich are combinable because they are concerned with a similar technical field, namely, that of molding operations with soluble starch products. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Rose's specific starch in van Lengerich's process in order to form a very specific product having desired physical properties.

Regarding Claims 2-4, van Lengerich shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the moisture in said barrel does not exceed (Claim 2) 22.5% by weight of said starch (Column 21, lines 25-27), (Claim 3) 20% by weight of said starch (Column 21, lines 25-27), and (Claim 4) 17.5% by weight of said starch (Column 21, lines 25-27), meeting applicant's claim.

Regarding Claim 5, van Lengerich shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of drying said extruded starch product to a moisture content below about 15% to form a dried product (Column 24, lines 6-9), meeting applicant's claim.

Regarding Claim 6, van Lengerich shows the process as claimed as discussed in the rejection of Claims 1 and 5 above, including a method wherein said starch product is

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dried to a moisture content between about 9% and about 12 % (Column 24, lines 6-9), meeting applicant's claim.

Regarding Claim 7, van Lengerich shows the process as claimed as discussed in the rejection of Claims 1, 5, and 6 above, including a method further comprising the step of grinding said dried product (Column 22, lines 8-10), meeting applicant's claim.

Regarding Claim 37, van Lengerich shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein said starch has a solubility of at least 99% in water at 25°C (Column 22, lines 32-33; It is noted that the term "water soluble" is being interpreted as being able to dissolve 100% in water at 25°C), meeting applicant's claim.

Regarding Claim 33, van Lengerich shows that it is known to carry out a process for preparing an extruded starch product comprising providing a seasoning adherence solution (Column 5, lines 23-30), and applying said seasoning adherence to said food product in a manner effective to cause seasoning in said solution to adhere to said food substrate; said seasoning adherence solution having been prepared by mixing water, an extruded starch product, and a seasoning to form said solution (Column 5, lines 23-30), said product having been formed by a process comprising providing a starch (Column 7, lines 54-65), and extruding said starch in an extruder, said extruder having a barrel, a die, and at least one rotating shaft, said barrel having at least first and second zones, said first zone being upstream from said second zone, the temperature in said first zone being insufficient to gelatinize said starch (Column 22, lines 39-48) and the temperature in said second zone being sufficient to gelatinize said starch, said starch being extruded in the

presence of total moisture in said barrel no greater than about 25% by weight of said starch, said process including the step of controlling the rotational speed of said shaft to impart a specific mechanical energy to said starch sufficient to result in a soluble extruded starch product that is capable of extrusion through said die at said rotational speed (Column 22, lines 49-67). van Lengerich does not explicitly show a hydroxyalkyl starch. Rose shows that it is known to carry out a process for making a soluble starch product wherein the starch is a hydroxyalkyl starch being derivatized with a hydroxyalkyl substituent having from 2 to 6 carbon atoms (Column 4, lines 6-14). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Rose's specific starch in van Lengerich's process in order to form a very specific product having desired physical properties.

Regarding Claims 34-36, van Lengerich shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the moisture in said barrel does not exceed (Claim 34) 22.5% by weight of said starch (Column 21, lines 25-27), (Claim 35) 20% by weight of said starch (Column 21, lines 25-27), and (Claim 36) 17.5% by weight of said starch (Column 21, lines 25-27), meeting applicant's claim.

Regarding Claim 38, van Lengerich shows the process as claimed as discussed in the rejection of Claim 33 above, including a method wherein said starch has a solubility of at least 99% in water at 25°C (Column 22, lines 32-33; It is noted that the term "water soluble" is being interpreted as being able to dissolve 100% in water at 25°C), meeting applicant's claim.

***Response to Arguments***

Applicant's arguments with respect to claims 1-7 and 33-38 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patent is cited to further show the state of the art with regard to molding starch compounds in general:

U.S. Patent 6,159,516 to Axelrod et al.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A Fontaine whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianne can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Maf  
June 14, 2004



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**